

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of)
)
PUBLIC UTILITIES COMMISSION)
)
Instituting a Proceeding to Investigate)
Distributed Generation in Hawaii.)
)

Docket No. 03-0371

KAUAI ISLAND UTILITY COOPERATIVE'S RESPONSES TO
THE GAS COMPANY'S INFORMATION REQUESTS

AND

CERTIFICATE OF SERVICE

OSHIMA CHUN FONG & CHUNG LLP

Alan M. Oshima, Esq.
Kent D. Morihara, Esq.
Davies Pacific Center
841 Bishop Street
Suite 400
Honolulu, Hawaii 96813
Telephone: (808) 528-4200

Attorneys for KAUAI ISLAND UTILITY
COOPERATIVE

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THE GAS COMPANY'S INFORMATION REQUESTS

COMES NOW, KAUAI ISLAND UTILITY COOPERATIVE, by and through its attorneys,
Oshima Chun Fong & Chung, hereby submits its Responses to The Gas Company's Information
Requests.

DATED: Honolulu, Hawai'i, June 16, 2004.



ALAN M. OSHIMA
KENT D. MORIHARA

Attorneys for KAUAI ISLAND UTILITY
COOPERATIVE

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
TO THE GAS COMPANY'S INFORMATION REQUESTS
DOCKET NO. 03-0371**

TGC/KIUC-SOP-IR-1

Ref: KIUC Preliminary Statement of Position

Please provide an electronic version of KIUC's current tariff rules and schedules for purposes of facilitating responses to the Commission's issue 13, regarding changes needed to utility rules and practices to facilitate the successful deployment of DG.

Response:

An electronic version will be e-mailed together with the responses to these information requests as Attachment TGC/KIUC-SOP-IR-1.

Sponsor:

Joe M^cCawley

**ATTACHMENT
TGC/KIUC-SOP-IR-1**

(An electronic version will be provided via e-mail)

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-2

Ref: HECO Preliminary Statement of Position, p. 15:

"...in the case of customer-sited CHP systems and DG owned by third-parties, the Commission's role is to review whether the retail sale of electricity by such third-party owners falls within the purview of the public utility statutes. To date, the Companies have not yet taken the position that these third-party owned installations should be regulated by the Commission, due to the relatively small number of such installations."

- a. Does KIUC have a position on whether electricity generated by a CHP provider, behind the fence, on the premises of a user, for use by the user and not to deliver electricity to the grid, "falls within the purview of the public utility statutes"? Please explain. Does KIUC's response change if the arrangement between the user and the third-party CHP provider is on a "share-the-savings" basis?

Response:

If no electricity is delivered to the grid, no electricity is sold or delivered directly or indirectly to any entity other than the primary user, and the CHP plant is owned by the user, then the CHP plant would probably not fall within the purview of the public utility statutes. If not owned by the user, then the terms of the transaction between the CHP owner and the user may be relevant in determining whether the owner is holding itself out to the public, directly or indirectly. For example, if the premises in question is a multi-tenanted building, like a shopping center, and if the CHP will provide electricity to many users on that property through metered delivery, the fact that the CHP is located on private property may not be the sole determinant of public utility status. It is difficult to answer this question without more facts.

Regarding the "share the savings" approach, KIUC would have to review the terms of that offering before taking a definite position. However, preliminarily, if the electricity is provided to the owner of the premises (subject to the tenancy variations discussed above), the terms of the sale may not be the relevant determinant of the public utility status.

There are other factors that would be considered. For example, although the CHP is sited within customer premises, if the CHP provider's plans clearly include siting multiple plants on the premises of the public utility's major customers, then the individual site locations may not be the determining factor of public utility standing. The CHP provider may in such a situation be deemed as holding

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TGC/KIUC-SOP-IR-2 (cont.)

itself out to the public as a provider of utility services, thereby subjecting itself to Commission regulation.

- b. Please list every instance of which KIUC is aware where cogenerator producing power for consumption on the premises sought and received a determination from the Hawaii PUC that it was not holding itself out as engaged in the business of supplying its product or service to the public as a class or to any limited portion of the public and therefore was not a public utility.

Response:

KIUC does not have any direct knowledge of any such determinations as it pertains to cogenerators producing power. However, KIUC is aware of the Commission's decision in Decision and Order No. 9686 filed on March 4, 1988 in Docket No. 5660, which held that a Common Premises Communications System (CPCS) provider, if its plant and equipment is dedicated to public use, is a public utility as that term is defined under HRS §269-1 and must obtain a Certificate of Public Convenience and Necessity under HRS §269-7.5 prior to commencing its business.

Sponsor:

Mike Yamane

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-3

Ref: KIUC Preliminary Statement of Position, p.8

"...KIUC believes that any determination as to the specific forms of distributed generation that may be feasible and viable for Hawaii is outside the scope of the stated objective and the subject docket..."

Does this mean that KIUC believes that it is not necessary to determine feasibility and viability of specific forms in order to develop rules and regulations deemed necessary to govern distributed generation in Hawaii?

Response:

Given the Commission's stated objective in opening the subject generic docket to develop policies and a framework for distributed generation projects, KIUC believes that a determination of the specific forms of distributed generation that may be feasible and viable for Hawaii is outside of the scope of that stated objective. KIUC believes this is especially true given the fact that the distributed generation industry is at a crossroads, where it is currently too early to determine with any degree of certainty not only what forms of distributed generation may become widely accepted, but also whether the industry will evolve to become a major contributor to Hawaii's electric system or whether it will remain primarily an industry serving niche markets. Given these uncertainties, KIUC believes that any rules and regulations that are enacted or revised to attempt to address specific forms of generation are premature at this time until the above uncertainties are resolved. In fact, attempting to enact or revise rules and regulations based on current specific types of distributed generation technologies may end up actually limiting or restricting the future use or applicability of new technologies. As such, in KIUC's opinion, any such rules and regulations should remain sufficiently broad to accommodate and adapt to the future direction of distribution generation and the evolution of distributed generation technologies.

Sponsor:

Mike Yamane

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-4

Ref: KIUC Preliminary Statement of Position, p.8

"It is only after such an extensive analysis takes place that an electric utility can determine what types of distributed generation would be most suitable for the different areas in Hawaii, the utility, its customers and its electrical system."

Please explain if KIUC believes that only an electric utility can and should make the determination on what a user can install on his/her premises even if the distributed generation facility will be designed and used only to serve the user's load and not to deliver power to the grid.

Response:

KIUC does not believe that only an electric utility can and should make the above determination. The above statement was made in the context of the analysis that should take place before an electric utility makes that determination for their purposes. When an individual member is involved, the installation of DG will be based purely on their own decision, especially when the distributed generation facility will be designed and used only to serve the user's load and not to deliver power to the electric utility's grid.

Sponsor:

Mike Yamane

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-5

Ref: KIUC Preliminary Statement of Position, p. 9

"KIUC would also consider entering into a joint venture with other entities, and ... KIUC would also consider being a possible owner of the distributed generation facilities, but not necessarily the builder or installer of the facilities, if it would provide material benefits to KIUC and its members."

- a. Does KIUC believe that being the owner or part owner of the facilities would make the installation/property subject to Commission oversight and regulation?

Response:

KIUC has no position on whether ownership in part or as a whole would make the property subject to Commission oversight. Such a determination would have to be made based on the specific facts involved for that particular installation/property.

- b. Please explain what KIUC believes the difference in regulatory treatment would be between two similar user-sited facilities, one owned by the end-user and the other owned by KIUC, including the potential advantages and/or disadvantages of each.

Response:

See the response to part a. above.

- c. What "material benefits" does KIUC consider would justify such ownership? Please explain whether and why such benefits would depend on KIUC being an owner of the DG facility.

Response:

See the responses to CA-SOP-IR-27 and 28.

Sponsor:

Mike Yamane
Joe M^cCawley

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-6

Ref: KIUC Preliminary Statement of Position, p.9

"...KIUC recognizes that owning the distributed generation facility ... would give KIUC some assurances that the distributed generation facility would be constructed and maintained in a manner beneficial to KIUC's electric grid, and would provide KIUC with another resource for planning and investing in its local electric transmission and distribution system, which could potentially offset or reduce system costs."

- a. Please explain if KIUC has or would modify its generation resource planning criteria to include distributed generation feeding into the grid and, if so, the possible changes that might be considered.

Response:

As stated in its preliminary statement of position, KIUC believes that if there are enough distributed generation systems connected to its grid, a percentage of the total capacity could be used for planning reserves.

- b. Please explain if KIUC has or would modify its transmission and distribution planning criteria to include distributed generation feeding into the grid and, if so, the possible changes that might be considered.

Response:

Transmission and distribution planning is based on estimating the anticipated load of an area or development. This would remain the same whether distributed generation was feeding into the grid or not.

- c. To what specific assurances does KIUC refer? Please explain how such ownership would provide those assurances and whether and why ownership is necessary to obtain such assurances.

Response:

The assurances referred to in KIUC's Preliminary Statement of Position are technical in nature. KIUC, being an electric company providing energy to the island of Kauai, will bring a significant level of expertise in this area. If KIUC were not the owner, KIUC may not have sufficient oversight over the construction, maintenance and operation of the distributed generation facility. However, KIUC recognizes that if, at the interest of its members, it agreed to construct and maintain the distributed generation facility, it could still have sufficient assurances without actually being the owner of the facility.

Sponsor:

Mike Yamane

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-7

Ref: KIUC Preliminary Statement of Position, p. 12

"...if various distributed generation facilities are scattered throughout a given geographic area, the electric utility could possibly rely on a percentage of the total capacity of these facilities ... to defer or minimize capital improvements to its transmission and distribution systems."

- a. Does KIUC believe that its current standard design and operating practices and electric grid facilities are sufficient to operate a system with user-sited generation?

Response:

The design and operating practices used on KIUC's transmission and distribution system are intended to support a system operating with "one-way" power flow, that is, with power flowing from generating plants, through the transmission and distribution system to the customer. Problems can arise with interconnected distributed generation facilities sending power in the opposite direction of this flow. The primary issues of concern are personnel and customer safety, system protection, and power quality. Resulting problems include voltage regulation, overvoltages, unplanned and unintended tripping of protective devices, and various power quality effects. KIUC can only determine the impacts of "user-sited" interconnected generation on a case-by-case basis, analyzing the size, type and location of the distributed generation to determine the impact to its grid facilities and operating practices. It is only at that time that KIUC would be in a position to determine whether its current standard design and operating practices are sufficient to allow for the operation of a system with user-sited generation.

- b. If not, has KIUC begun to identify the potential changes and costs that may be required? For example, monitors/meter/recorders for T&D power flow, relay protection schemes, RTUs for remote operation of switches, breakers, etc.

Response:

See the response to part a. above.

Sponsor:

Mike Yamane
N. Richard Friedman

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-8

Ref: KIUC Preliminary Statement of Position, p.12

"Proper planning must take place to either continue or increase the electric utility's reliability and power quality in the event a distributed generation facility was implemented in a given area."

Please describe what type(s) of planning criteria changes might be involved in maintaining or increasing system reliability to accommodate distributed generation. Please explain if and how these changes would affect utility costs.

Response:

Once again, a determination of what specific type(s) of planning criteria changes might be required to accommodate distributed generation can only be determined on a case-by-case basis. However, generally, we anticipate that the general planning criteria would remain the same. For example, transmission and distribution planning will remain based on estimating the anticipated load of an area or development, meeting this load and possible future loads, while still maintaining proper system voltage.

Sponsor:

Mike Yamane

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-9

Ref: KIUC Preliminary Statement of Position, p.12

"...the steps taken to prevent any degradation of the electric utility's transmission and distribution systems resulting from the distributed generation facilities."

Please explain what steps KIUC is referring to in this statement. Has KIUC performed any analysis of the potential need for such steps? If so, please provide a copy of the analysis.

Response:

See the response to TGC/KIUC-SOP-IR-7, part a.

Sponsor:

Mike Yamane

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-10

**Ref: KIUC Preliminary Statement of Position, Article III,
Section 9, pp. 14-17.**

- a. Please explain if KIUC's concerns differentiate between users whose facilities will not transmit power to the utility grid, those that will transmit but not sell, and those that will sell power to the utility grid.

Response:

KIUC's concerns do not differentiate between exporting or non-exporting distributed generation facilities interconnected and operating in parallel to our electrical system.

- b. If KIUC's concerns would differ by the type of user, please explain the differences. If the concerns would not differ, please explain KIUC's concerns with characteristics such as, but not limited to, maintenance requirements and hours of operation and how serving this customer would differ from serving other KIUC customers that exhibit load variations during the day or week.

Response:

KIUC's response to Issue 9 in its Preliminary Statement of Position addresses KIUC's concerns associated with interconnecting a distributed generation facility to its electrical system. These concerns are independent of the type of user (i.e. customer class) the distributed generation owner may be.

- c. Regarding item (e) on page 16, what "degradation" does KIUC refer to? What remedial steps are referred to here? Regarding item (o) on page 18, what reserve requirements and what "requirements and standards" are referred to? How are they to be determined?

Response:

Examples of degradation include:

- A distributed generation (DG) system degrading the utility's system reactive performance. This would occur when a DG system operates at a power factor that draws reactive power from the utility.
- A utility's level of service to other customers may be lessened, or degraded, as a result of the utility, at the request of the DG owner, delaying high speed re-closing of the utility's feeder circuit. The owner could request this to allow his interconnected generator sufficient time to remove itself from a de-energized feeder prior to automatic re-close.

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TGC/KIUC-SOP-IR-10 (cont.)

- Instability of the utility's system associated with under-frequency situations occurring with sporadic operating characteristics of the DG system.

As mentioned within the response to item (o):

- Reserve requirements refer to the dispatch and firm power characteristics of the DG facility.
- Requirements and standards refer to contract related issues, which may vary on a contract by contract basis. These could include, but not be limited to, kw, kwh, kvar, heat rate, forced outage, emissions, etc.

Sponsor:

Joe McCawley

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-11

**Ref: KIUC Preliminary Statement of Position, Article III,
Section 10, pp. 17-18.**

- a. As a cooperative, is KIUC required to conduct a cost of service study or similar analysis to support such agreements?

Response:

As a cooperative, KIUC is not required to conduct a cost of service study. However, KIUC does recognize the value of such a study to determine applicable costs.

- b. Does KIUC anticipate any legal concerns regarding the use of customer data and regulated pricing that is not available to other competitors? Please explain.

Response:

No. KIUC does not anticipate any legal concerns regarding the availability of customer data. KIUC's policy is that customer data is held confidentially, to be released only to that customer or to parties so designated by the customer.

- c. Would the Rural Utilities Service (RUS) or cooperative co-lender loan funds be available for such investments? If so, under what terms and conditions?

Response:

KIUC, as an electric cooperative, may apply to RUS for funds to be used for capital investments. Should KIUC decide to own and operate a DG facility, KIUC could submit a loan application to RUS for the associated funds. There is no guarantee that the application would be approved. The terms and conditions would be dependent upon that specific loan application.

Sponsor:

Joe M^cCawley

**KAUAI ISLAND UTILITIES COOPERATIVE'S RESPONSES
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TGC/KIUC-SOP-IR-12

Ref: KIUC Preliminary Statement of Position, p.18

"Under this scenario, the customer would receive the benefit of waste heat ..."

Please explain if KIUC has considered a pricing schedule for this waste heat. If so, how would the pricing be determined?

Response:

KIUC has not considered a pricing schedule for waste heat under this scenario.

Sponsor:

Joe McCawley

CERTIFICATE OF SERVICE

I (we) hereby certify that copies of the foregoing document were duly served on the following parties, by having said copies delivered as set forth below:

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GEORGE T. AOKI, ESQ.
The Gas Company
P.O. Box 3000
Honolulu, HI 96802-3000

1 copy
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The Gas Company
P.O. Box 3000
Honolulu, HI 96802-3000

1 copy
U.S. Mail

MS. GAIL S. GILMAN
The Gas Company
P.O. Box 3000
Honolulu, HI 96802-3000

1 copy
U.S. Mail

BRIAN T. MOTO, ESQ.
CORPORATION COUNSEL
County of Maui
Department of the Corporation Counsel
200 S. High Street
Wailuku, HI 96793

1 copy
U.S. Mail

CINDY Y. YOUNG, ESQ.
DEPUTY CORPORATION COUNSEL
County of Maui
Department of the Corporation Counsel
200 S. High Street
Wailuku, HI 96793

1 copy
U.S. Mail

MR. KALVIN K. KOBAYASHI
ENERGY COORDINATOR
County of Maui
Department of Management
200 S. High Street
Wailuku, HI 96793

1 copy
U.S. Mail

MR. WARREN S. BOLLMEIER II
PRESIDENT
Hawaii Renewable Energy Alliance
46-040 Konane Place, #3816
Kaneohe, Hawaii 96744

1 copy
U.S. Mail

MR. JOHN CROUCH
Box 38-4276
Waikoloa, HI 96738

1 copy
U.S. Mail

MR. RICK REED
Inter Island Solar Supply
761 Ahua Street
Honolulu, HI 96819

1 copy
U.S. Mail

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Honolulu, HI 96817

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U.S. Mail

SANDRA –ANN Y. H. WONG, ESQ.
1050 Bishop Street, #514
Honolulu, Hawaii 96813

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U.S. Mail

CHRISTOPHER S. COLMAN, ESQ.
Deputy General Counsel
Amerada Hess Corporation
One Hess Plaza
Woodbridge, N.J. 07095

1 copy
U.S. Mail

MR. MICHAEL DE'MARSI
Hess Microgen
4101 Halburton Road
Raleigh, NC 27614

1 copy
U.S. Mail

MR. JIM REISCH
Vice President & General
Manager-Engine Division
Pacific Machinery, Inc.
94-025 Farrington Highway
Waipahu, Hawaii 96797

1 copy
U.S. Mail

LANI D. H. NAKAZAWA, ESQ.
Office of the County Attorney
County of Kauai
4444 Rice Street, Suite 220
Lihue, HI 96766

2 copies
U.S. Mail

MR. GLENN SATO
ENERGY COORDINATOR
c/o Office of the County Attorney
County of Kauai
4444 Rice Street, Suite 220
Lihue, HI 96766

1 copy
U.S. Mail

JOHN W. K. CHANG, ESQ.
Deputy Attorney General
Department of the Attorney General
State of Hawaii
425 Queen Street
Honolulu, Hawaii 96813

1 copy
U.S. Mail

MR. MAURICE H. KAYA, P.E.
Chief Technology Officer
DBEDT-Strategic Industries Division
P. O. Box 2359
Honolulu, HI 96804

1 copy
U.S. Mail

MR. STEVEN ALBER
Energy Analyst
DBEDT-Strategic Industries Division
P. O. Box 2359
Honolulu, HI 96804

1 copy
U.S. Mail

DATED: Honolulu, Hawai'i, June 16, 2004.



ALAN M. OSHIMA
KENT D. MORIHARA

Attorneys for KAUAI ISLAND UTILITY
COOPERATIVE